

d) 1, 2, 3 and 4

Ans) c

Exp) Option c is correct.

Statement 1 is correct. Pacific decadal oscillation (PDO) is a robust, recurring pattern of ocean-atmosphere climate variability centered over the mid-latitude Pacific basin. The PDO is detected as warm or cool surface waters in the North Pacific (poleward of 20°N).

Statement 2 is incorrect. Unlike El Nino and La Nina, which may occur every 3 to 7 years and last from 6 to 18 months, the PDO can remain in the same phase for 20 to 30 years. It is a long-term ocean fluctuation of the Pacific Ocean. The multi-year Pacific Decadal Oscillation 'cool' trend can intensify La Nina or diminish El Nino impacts around the Pacific basin. The shift in the PDO can have significant implications for global climate, affecting Pacific and Atlantic hurricane activity, droughts and flooding around the Pacific basin, the productivity of marine ecosystems, and global land temperature patterns.

Statement 3 is correct. The PDO, similar to El Nino-Southern Oscillation (ENSO) in character, like ENSO, consists of a warm and cool phase which alters upper-level atmospheric winds.

Statement 4 is correct. Rainfall in the Northeast India is largely dependent on monsoon rainfall and the impact of Pacific decadal oscillation (PDO) is clearly visible in the region in the form of deficit rainfall over the years.

Source: <https://earthobservatory.nasa.gov/images/8703/la-nina-and-pacific-decadal-oscillation-cool-the-pacific>

<https://blog.forumias.com/why-is-northeast-india-drying-up-rapidly/>

Q.14) Which of the following factors are responsible for the increase in number and intensification of cyclones in the Arabian Sea?

1. Increase in sea surface temperature of Arabian sea.
2. Excess energy availability and moisture in Arabian sea due to global warming.
3. Arabian Sea provides conducive wind shear for cyclones.
4. Increase in frequency of El Nino in the region.

Select the correct answer using the code given below:

- a) 1 and 4 only
- b) 2, 3 and 4 only
- c) 1, 2 and 3 only
- d) 1, 2, 3 and 4